

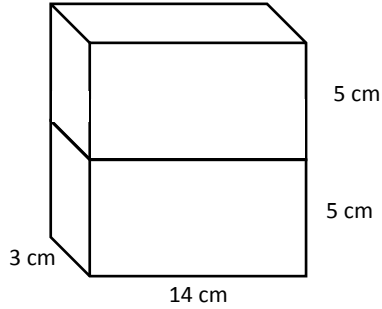


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Find the total volume of the figures, and record your solution strategy.

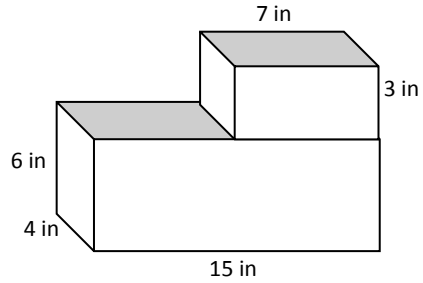
a.



Volume: \_\_\_\_\_

Solution Strategy:

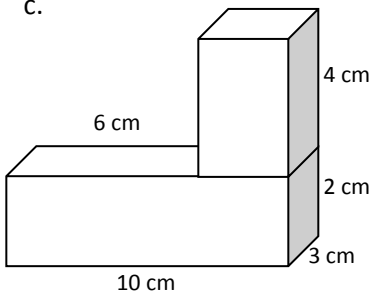
b.



Volume: \_\_\_\_\_

Solution Strategy:

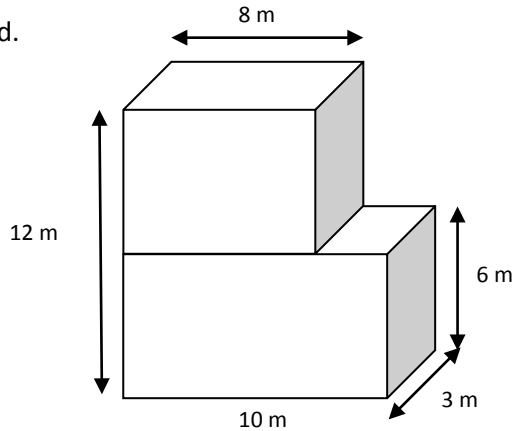
c.



Volume: \_\_\_\_\_

Solution Strategy:

d.

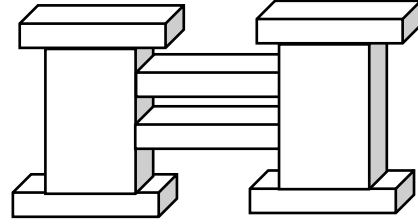


Volume: \_\_\_\_\_

Solution Strategy:



2. A sculpture (pictured below) is made of two sizes of rectangular prisms. One size measures 13 in by 8 in by 2 in. The other size measures 9 in by 8 in by 18 in. What is the total volume of the sculpture?



3. The combined volume of two identical cubes is 128 cubic centimeters. What is the side length of each cube?
4. A rectangular tank with a base area of  $24 \text{ cm}^2$  is filled with water and oil to a depth of 9 cm. The oil and water separate into two layers when the oil rises to the top. If the thickness of the oil layer is 4 cm, what is the volume of the water?



5. Two rectangular prisms have a combined volume of 432 cubic feet. Prism A has half the volume of Prism B.
- What is the volume of Prism A? Prism B?
  - If Prism A has a base area of  $24 \text{ ft}^2$ , what is the height of Prism A?
  - If Prism B's base is  $\frac{2}{3}$  the area of Prism A's base, what is the height of Prism B?



Name \_\_\_\_\_

Date \_\_\_\_\_

Geoffrey builds rectangular planters.

1. Geoffrey's first planter is 8 feet long and 2 feet wide. The container is filled with soil to a height of 3 feet in the planter. What is the volume of soil in the planter? Explain your work using a diagram.

2. Geoffrey wants to grow some tomatoes in four large planters. He wants each planter to have a volume of 320 cubic feet, but he wants them all to be different. Show four different ways Geoffrey can make these planters, and draw diagrams with the planters' measurements on them.

Planter A	Planter B
Planter C	Planter D

